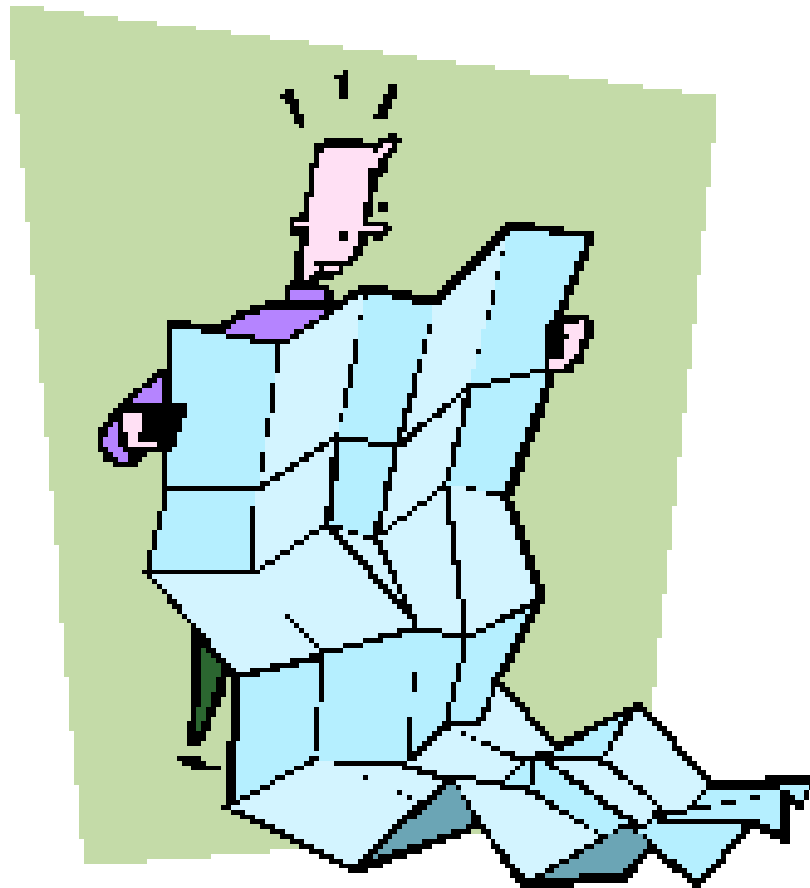


Chapter 6

Maps



Introduction

- Map reading is required for crash analyses
- Used to identify coinciding routes, local road names, structures, affected intersections and other features, and any potential safety issues
- Used to identify locations on volume (AADT) maps
- **Map reading is key to *KNOWING YOUR LOCATION!!!!***

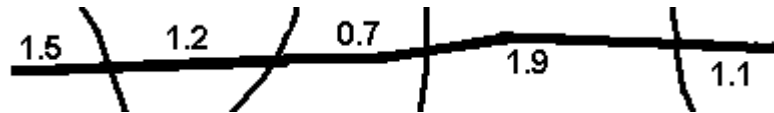
Terminology

Scale - Means of determining distances

Types that can be found on maps:

- 1) Direct measurement (many electronic maps such as microstation, GIS, Google Maps, etc. have a measuring tool)
- 2) Distance values at intervals between intersections – these are generally on NCDOT county maps and indicate distances between state-maintained roads (I, US, NC, or SR) and/or boundaries (state, county, or municipal)

Example:



- 3) A calibrated line

Example:



- 4) Proportion/Ratio (least preferred)

Example: 1 inch = 1 mile

Terminology (cont.)

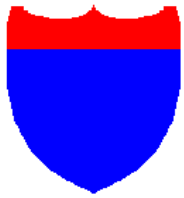
- **North Arrow** - A symbol which indicates the north direction on a map



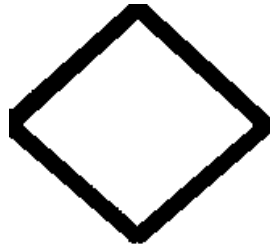
- **Legend** - Explanatory caption describing map symbols
- **Inset** - Small map within a larger map (insets use a different scale than the rest of the map)

Terminology (cont.)

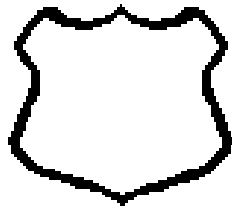
- **North Carolina Route Symbols** - Standard symbols used to identify different roadway types



Interstate



NC
Route



US
Route

1010

Secondary
Route

- **Feet/Miles Conversion**

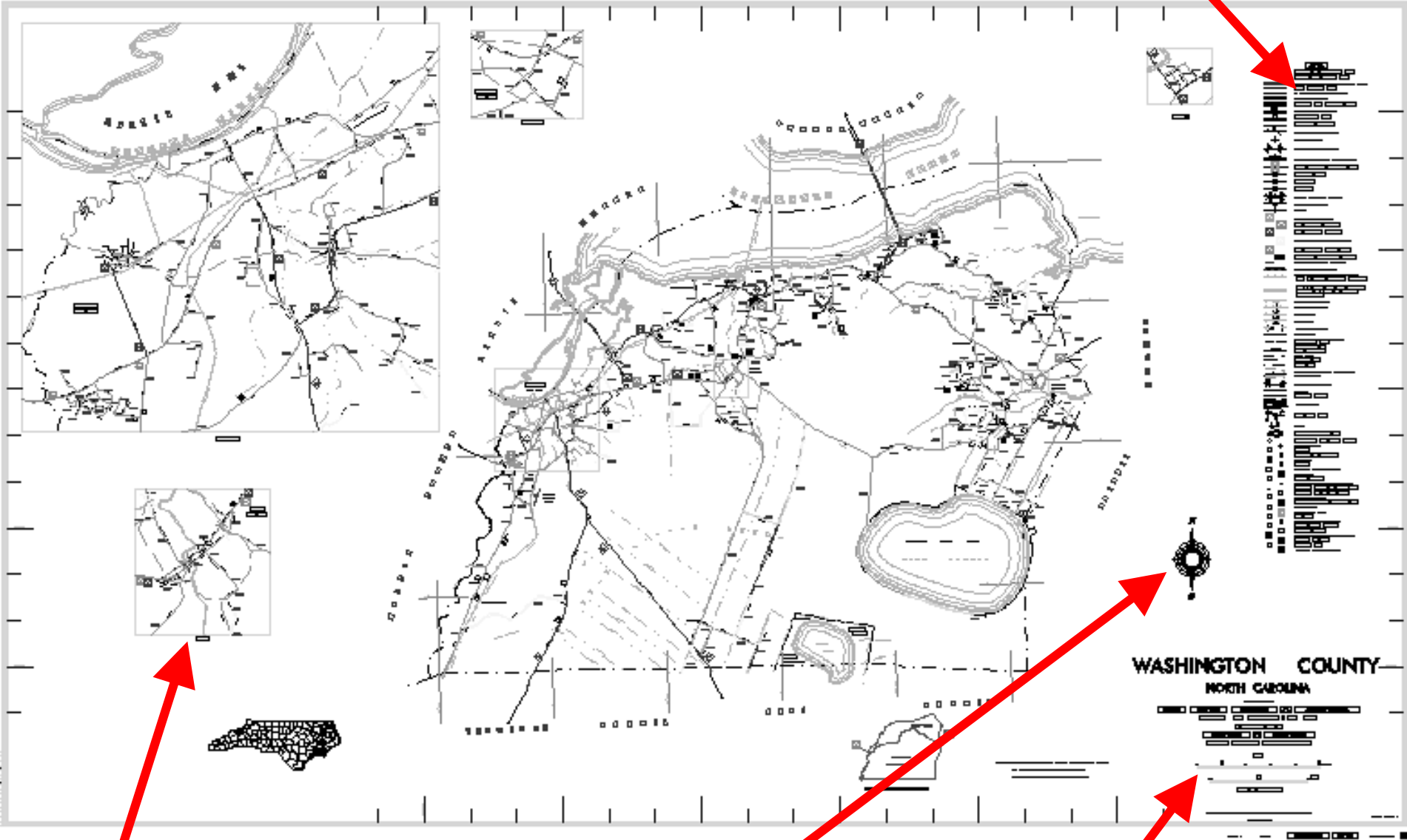
1 Mile = 5,280 feet (divide feet by 5,280 to get miles)

- **Notes in using North Carolina county maps**

- Use the legend to identify any unknown features
- Use the correct scale
- Inset will be labeled with a different scale

County Map Example

Legend



Inset

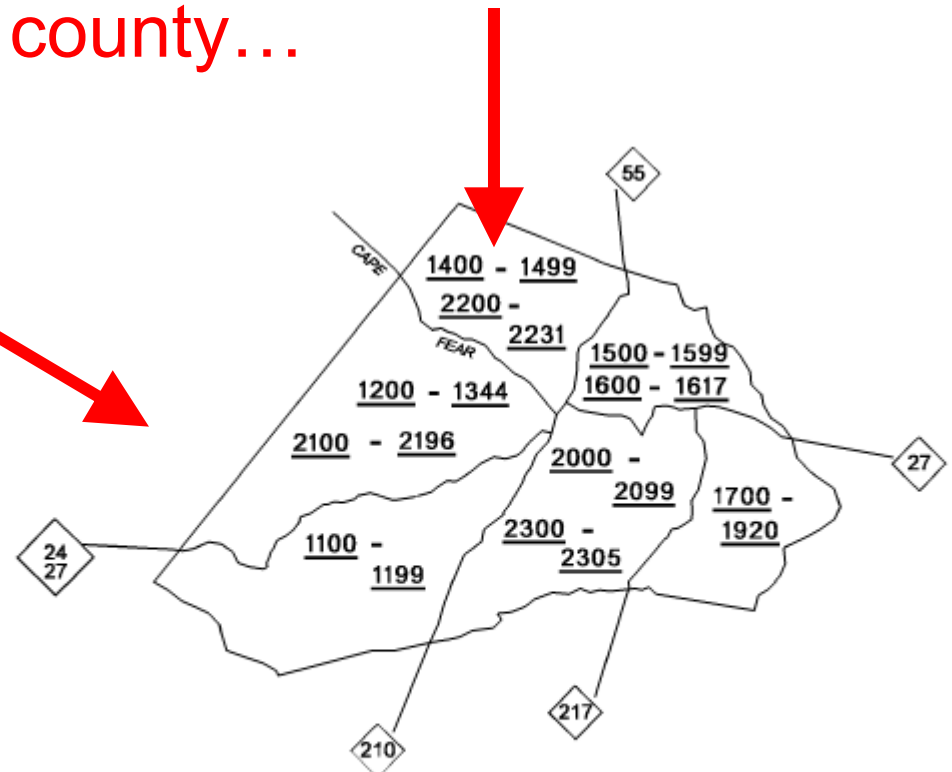
North Arrow

Scales

County Map Example (cont.)



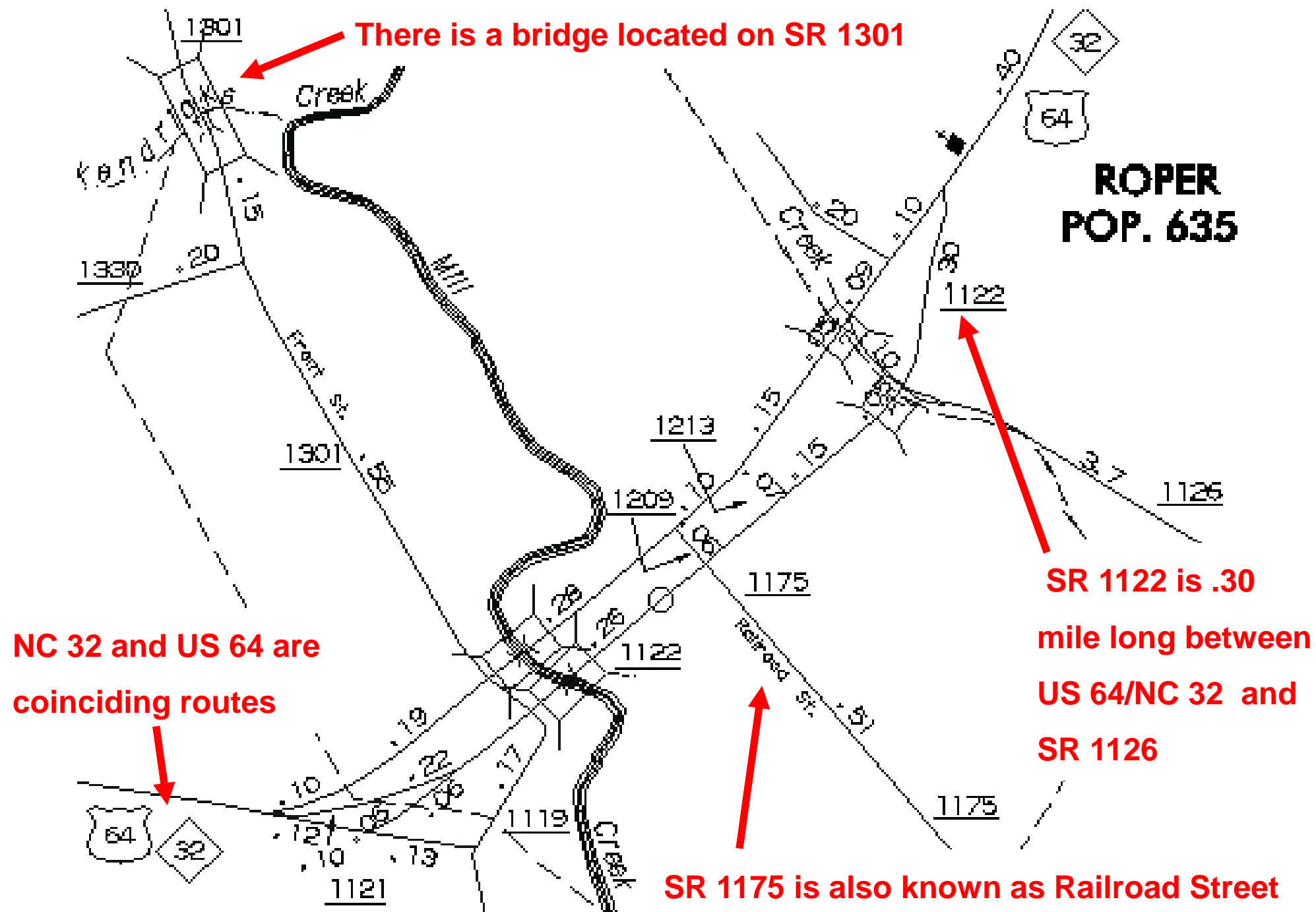
Secondary routes are generally confined to a specific part of each county...



...but those starting with “10” may be former primaries or major routes and can extend anywhere within a county and even cross county lines.

KEY TO COUNTY ROAD NUMBERS
ALSO NUMBERS 1001 - 1006 , 2090

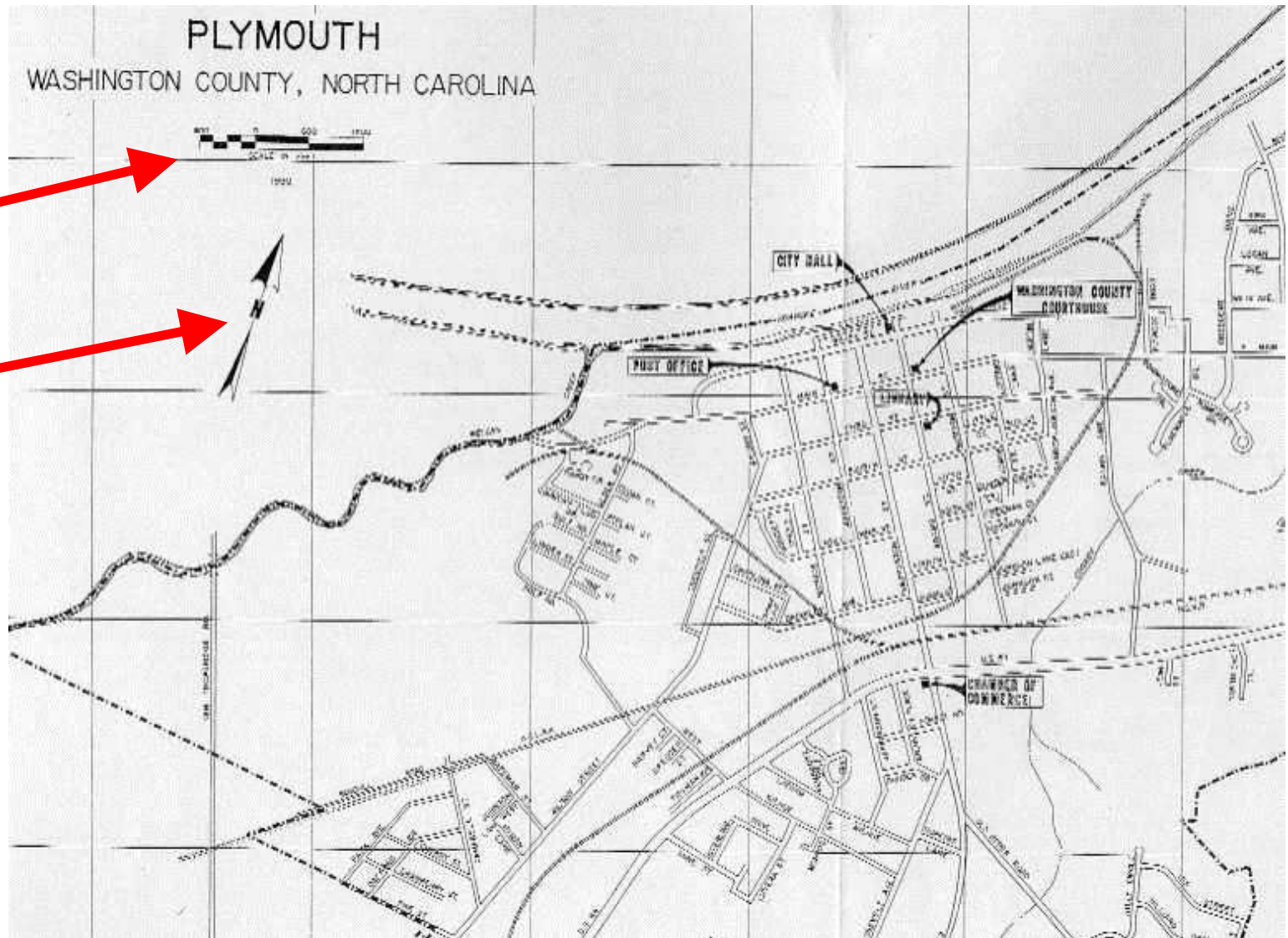
Inset Example



Paper Map Example

Scale

North
Arrow



NOTE – If no distances are indicated then rulers or dividers and the provided scale must be used to calculate distances.

Electronic Maps

- NCDOT county maps
- NCDOT bridge maps
- NCDOT Microstation maps
- North Carolina Truck Network (NCTN) map
- County GIS maps (tax/land records)
- Google Maps
- Other mapping software (Microsoft Streets and Trips, etc.)

NCDOT County Maps

County Maps

These county maps identify routes that make up the North Carolina Department of Transportation State Highway System. These routes are maintained by the North Carolina Department of Transportation and consist of Primary and Secondary routes.

Select a county on the map or dropdown menu to view available maps.



Select a County to View
Available Maps

Johnston

Choose Your Map Type:

[County Maps](#)

[Bridge Location Maps](#)

[Federal Aid Route Maps](#)

[Non Federal Aid Route Maps](#)

[Microstation Map Files](#)

More County Maps:

Selected County: **Johnston**

County Map Images

TIFF Format

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

PDF Format

☒ 1 ☒ 2 ☒ 3 ☒ 4 ☒ 5

[Thumbnail Sheet Key](#)

[View Map Image](#)



<http://www.ncdot.org/travel/statemapping/default.html>

1. ☐ I am a member of the American Medical Association.
 2. ☐ I am a member of the American Academy on the Arts and Sciences.
 3. ☐ I am a member of the American Association of Economic Geologists.
 4. ☐ I am a member of the American Association of Geographers.
 5. ☐ I am a member of the American Association of Geographers.
 6. ☐ I am a member of the American Association of Geographers.
 7. ☐ I am a member of the American Association of Geographers.
 8. ☐ I am a member of the American Association of Geographers.
 9. ☐ I am a member of the American Association of Geographers.
 10. ☐ I am a member of the American Association of Geographers.

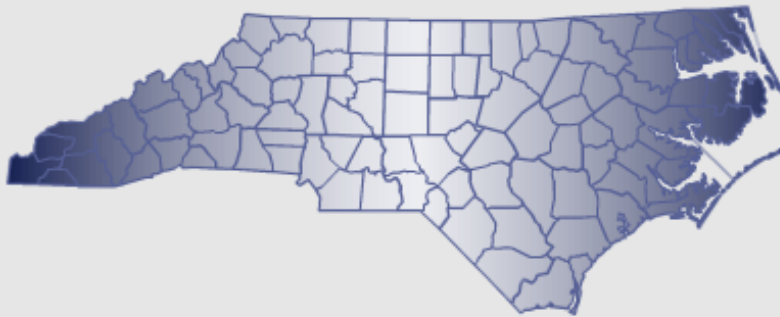


NCDOT Bridge Maps

County Maps

These county maps identify routes that make up the North Carolina Department of Transportation State Highway System. These routes are maintained by the North Carolina Department of Transportation and consist of Primary and Secondary routes.

Select a county on the map or dropdown menu to view available maps.



Select a County to View
Available Maps

Johnston

Choose Your Map Type:

[County Maps](#)

[Bridge Location Maps](#)

[Federal Aid Route Maps](#)

[Non Federal Aid Route Maps](#)

[Microstation Map Files](#)

More County Maps:

Selected County: Johnston

Bridge Location Maps

Bridge Locations

1 2 3 4 5

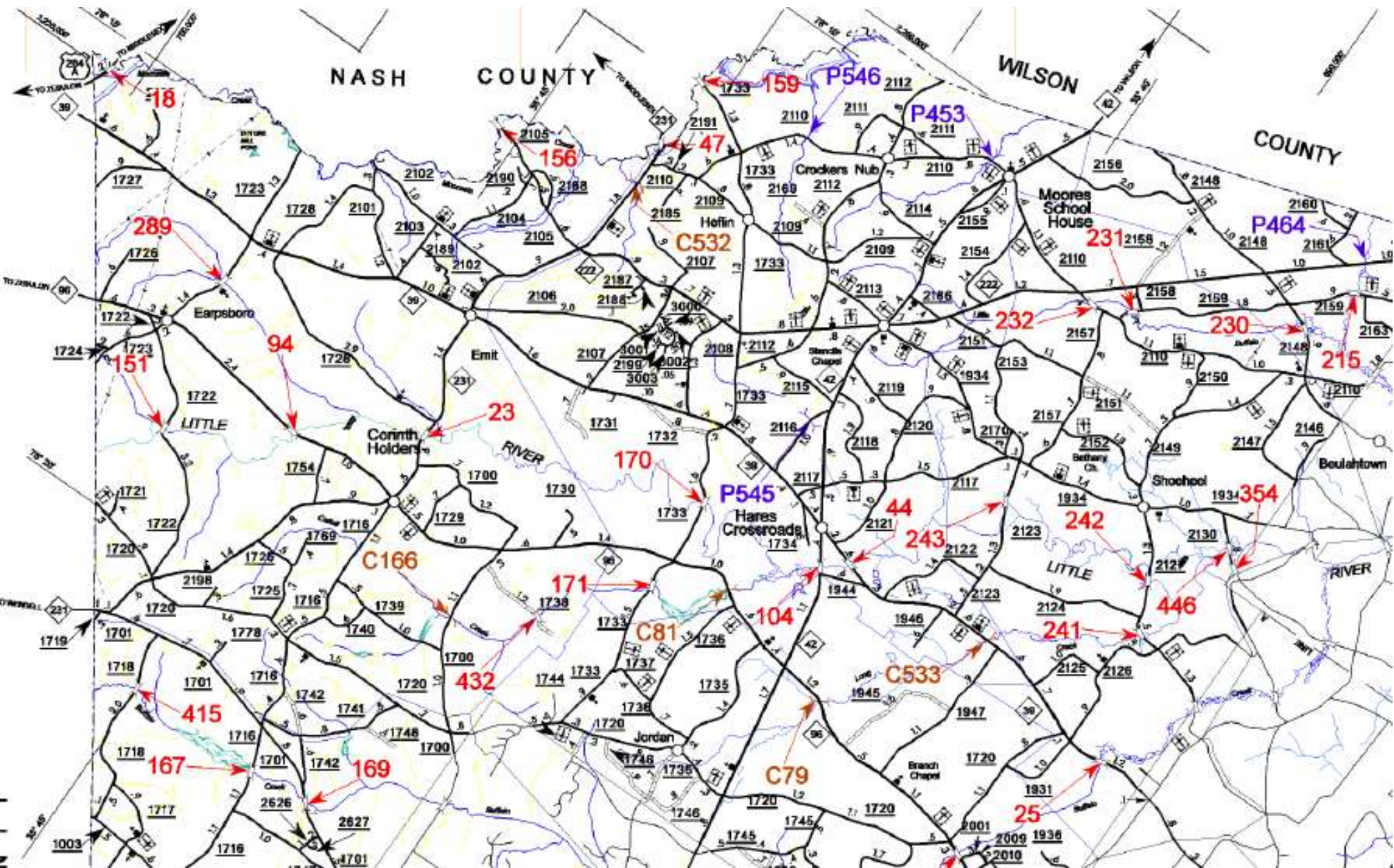
Bridge Locations with TIP Numbers

1 2 3 4

[Bridge Map Grid Sheet](#)

<http://www.ncdot.org/travel/statemapping/default.html>

NCDOT Bridge Maps (cont.)



NCDOT Microstation Maps






Microstation Files

About the Microstation Files

These Microstation-J files are provided by the State Road Maintenance Unit Mapping Section. They are available in meters or feet, depending on your application. The metric version of the designfiles should have all data available for all counties, including plot elements such as legends, sheet cells, titles, etc. The

metric designfiles also show greater detail (on the 4X insets) that do not get converted to the designfiles stored as stateplane feet. We are providing this data with no guarantee regarding the accuracy or completeness of the data. You should examine the Leveling Chart to understand the structure of the County Maps.


Leveling Resources

-  [Linework Leveling Chart](#)
-  [County Text File \(text\)](#)
-  [Urban Leveling Symbols \(text\)](#)
-  [Urban Leveling Chart \(text\)](#)
-  [Excel SpreadSheet Download of Chart Data](#)







On this page

- ☐ [About the Microstation Files](#)
- ☐ [Available Files](#)

Convert Metric to English

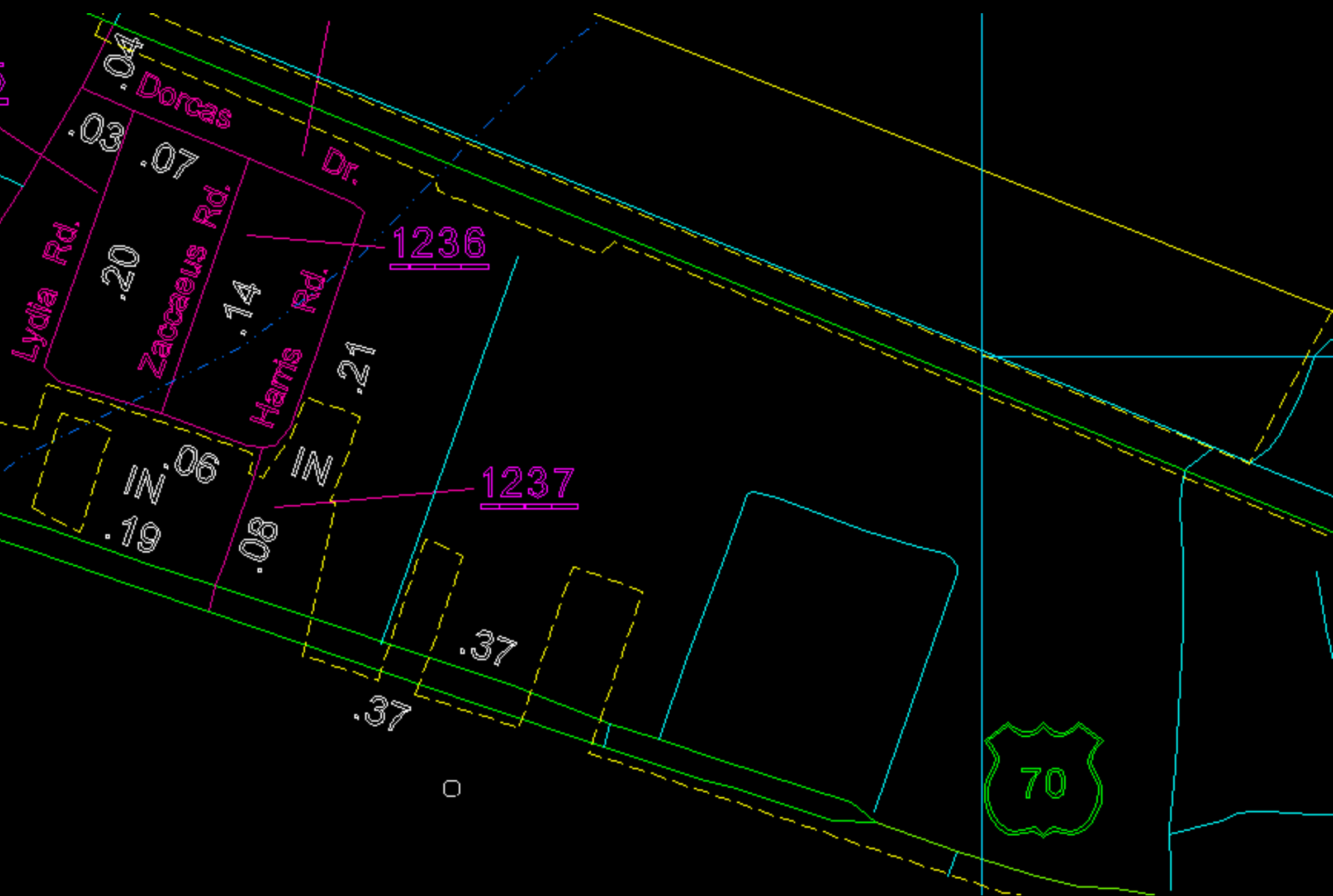
Copy the seed file ( [SRMU_MS_ENGLISH_seed.dgn](#)) to your local drive. Download a copy of the metric lin file that you need to your local drive with the seed file. Open the seed file; reference the metric lin from your local drive. In the reference dialog box under file, merge into master. This will make the conversion to English.

Available Files

| County | English | Metric lin | Metric plt |
|-----------|--|---|---|
| Alamance |  English DGN file |  Metric lin DGN file |  Metric plt DGN file |
| Alexander |  English DGN file |  Metric lin DGN file |  Metric plt DGN file |

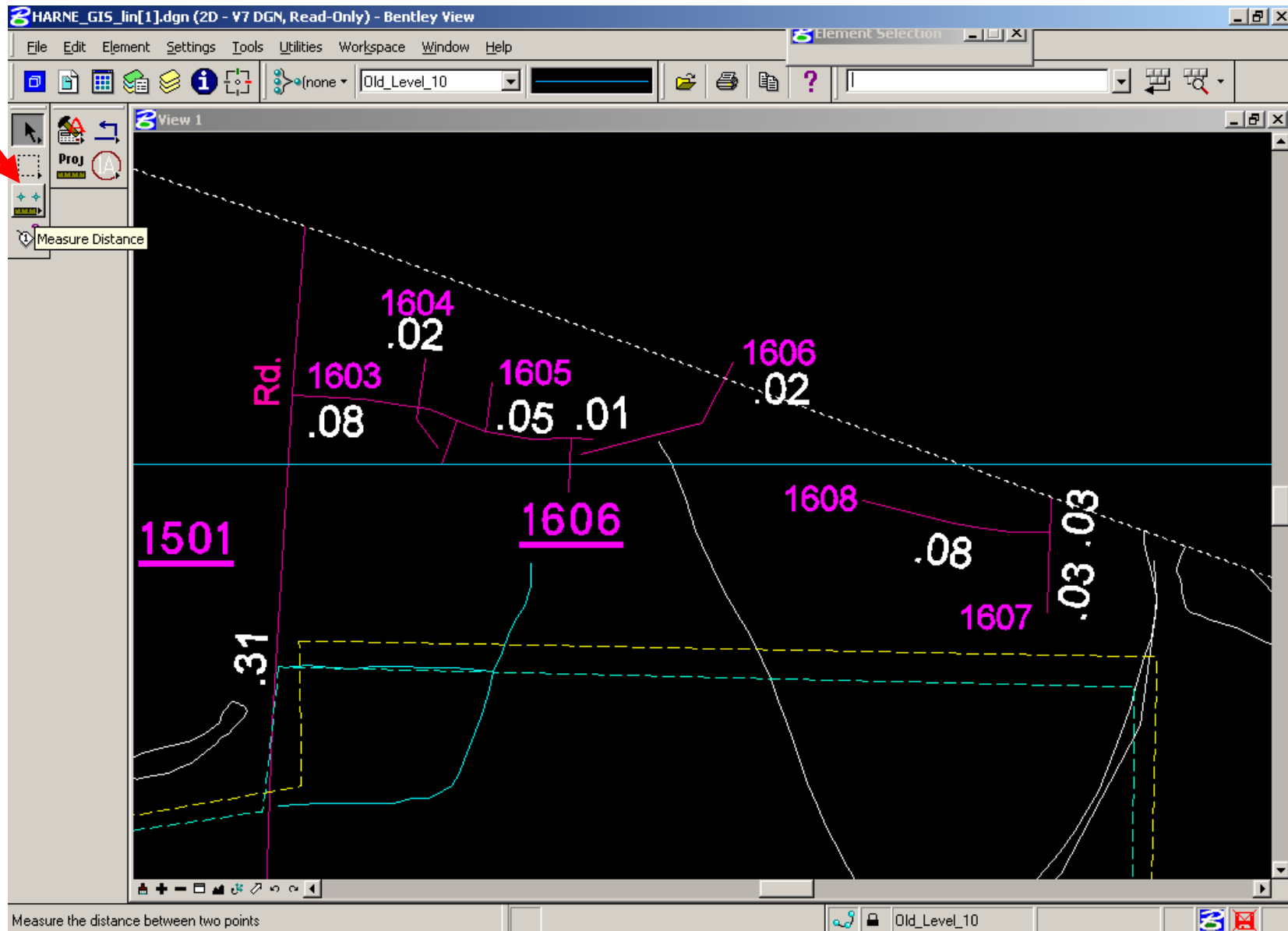
<http://www.ncdot.org/travel/statemapping/microstation/>

NCDOT Microstation Maps (cont.)

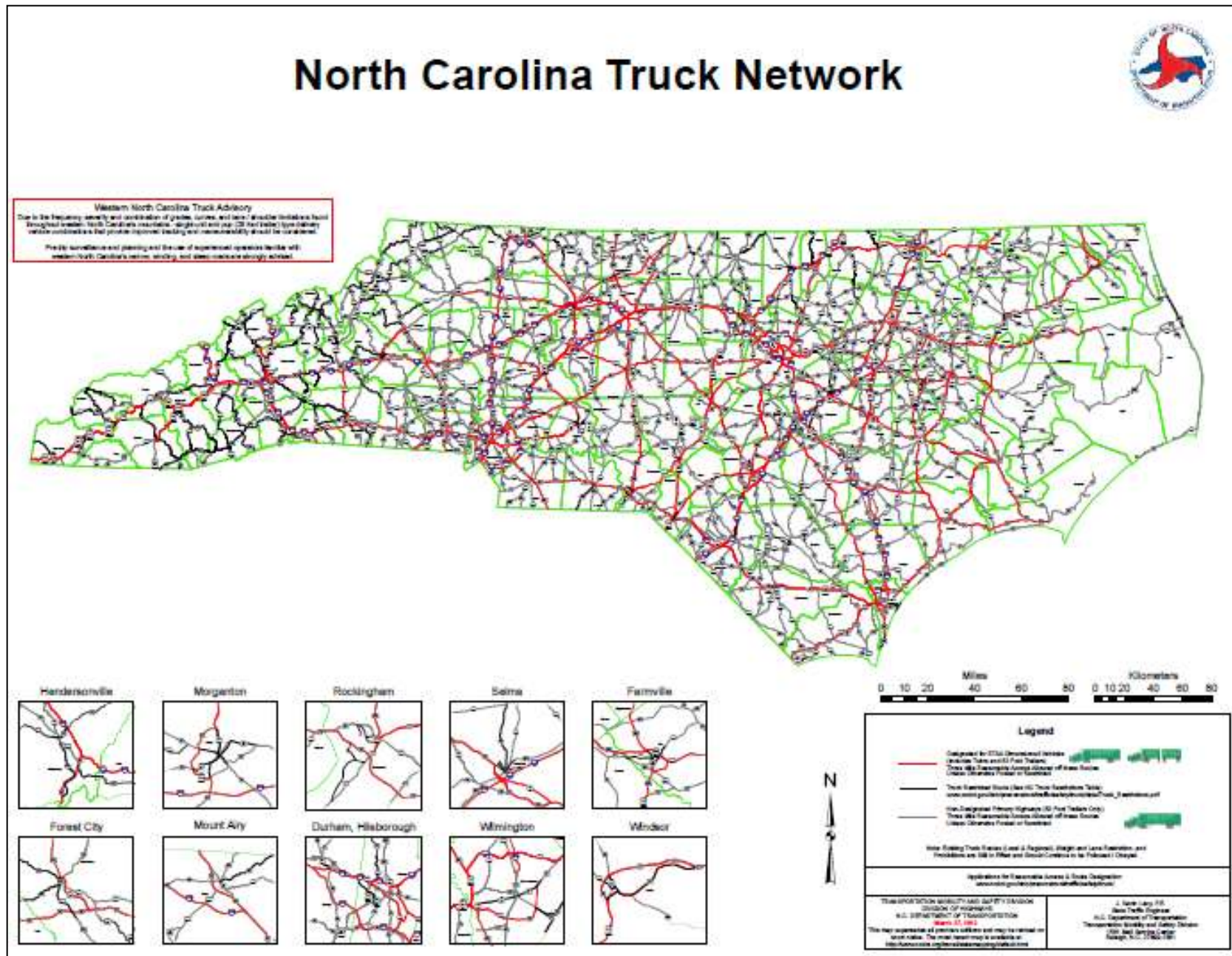


NCDOT Microstation Maps (cont.)

Measuring Tool



North Carolina Truck Network (NCTN) Map



NCTN Truck Restriction Table

North Carolina Truck Restrictions

| Road On | County | Type | Description | Ordinance | Effective |
|---------|-----------|------------------------|--|-----------|------------|
| I 26 | HENDERSON | Truck Lane Restriction | Single trucks with a gross vehicle weight rating (GVWR) of greater than 26,000 pounds with three (3) or more axles, or truck and trailer combinations with three (3) or more axles and a combined gross vehicle weight rating (GVWR) of greater than 26,000 pounds, shall be prohibited between 0.4 mile east of NC 225 and 2.4 miles east of NC 225. | 1059341 | 12/18/2008 |
| I 26 | MADISON | Truck Lane Restriction | Single trucks with a gross vehicle weight rating (GVWR) of greater than 26,000 pounds with three (3) or more axles, or truck and trailer combinations with three (3) or more axles and a combined gross vehicle weight rating (GVWR) of greater than 26,000 pounds, shall be prohibited to use the leftmost lane between the Tennessee State line and 0.75 mile west of US 19-23 (Exit 9). | 1059336 | 12/18/2008 |
| I 26 | POLK | Truck Lane Restriction | Single trucks with a gross vehicle weight rating (GVWR) of greater than 26,000 pounds with three (3) or more axles, or truck and trailer combinations with three (3) or more axles and a combined gross vehicle weight rating (GVWR) of greater than 26,000 pounds, shall be prohibited to use the leftmost lane between 3.3 miles west of SR 1135 and 0.4 mile west of SR 1135. | 1059342 | 12/18/2008 |
| I 40 | ALAMANCE | Truck Lane Restriction | Single trucks with a gross vehicle weight rating (GVWR) of greater than 26,000 pounds with three (3) or more axles, or truck and trailer combinations with three (3) or more axles and a combined gross vehicle weight rating (GVWR) of greater than 26,000 pounds, shall be prohibited to use the leftmost two lanes between the Guilford County line and the Orange County line. | 1059317 | 12/18/2008 |
| I 40 | BUNCOMBE | Truck Lane Restriction | Single trucks with a gross vehicle weight rating (GVWR) of greater than 26,000 pounds with three (3) or more axles, or truck and trailer combinations with three (3) or more axles and a combined gross vehicle weight rating (GVWR) of greater than 26,000 pounds, shall be prohibited to use the leftmost lane on I-40 westbound between the Haywood County line and 0.3 mile west of SR 1200. | 1059334 | 12/18/2008 |
| I 40 | BUNCOMBE | Truck Lane Restriction | Single trucks with a gross vehicle weight rating (GVWR) of greater than 26,000 pounds with three (3) or more axles, or truck and trailer combinations with three (3) or more axles and a combined gross vehicle weight rating (GVWR) of greater than 26,000 pounds shall be prohibited to use the leftmost lane between 0.3 mile east of SR 2531 and the McDowell County line. | 1059335 | 12/18/2008 |
| I 40 | DURHAM | Truck Lane Restriction | Single trucks with a gross vehicle weight rating (GVWR) of greater than 26,000 pounds with three (3) or more axles, or truck and trailer combinations with three (3) or more axles and a combined gross vehicle weight rating (GVWR) of greater than 26,000 pounds, shall be prohibited to use the leftmost lane between SR 1973 (Page Road) and the Wake County line. | 1059315 | 12/18/2008 |

County GIS Maps

County GIS maps can be located through an internet search...

[Web](#) [Images](#) [Videos](#) [Maps](#) [News](#) [Shopping](#) [Gmail](#) [more ▼](#)

[iGoogle](#) | [Search settings](#) | [Sign in](#)



Harnett County GIS

[Advanced Search](#)
[Language Tools](#)

Google Search

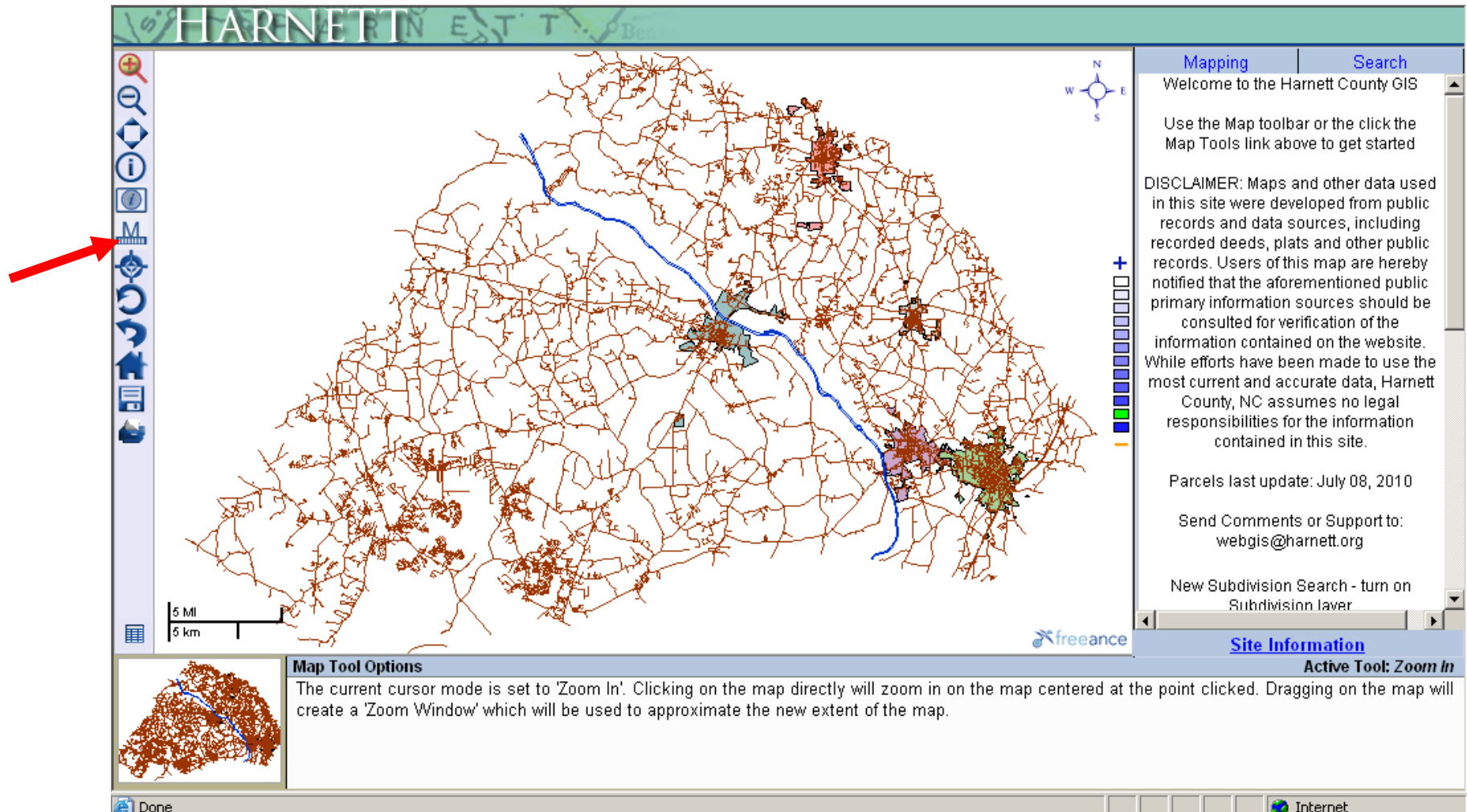
I'm Feeling Lucky

 [Make Google my homepage](#)

[Advertising Programs](#) - [Business Solutions](#) - [About Google](#)

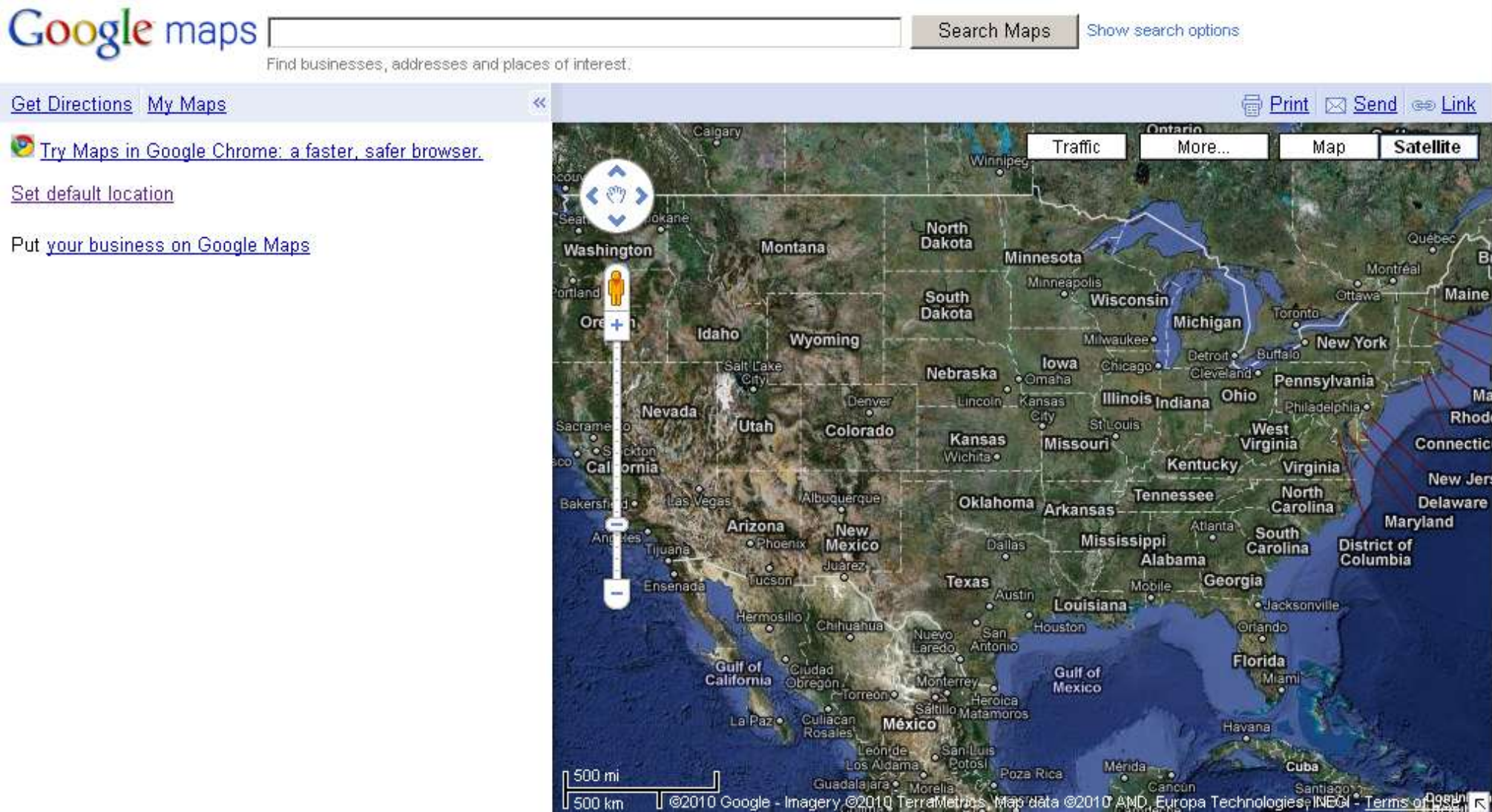
©2010 - [Privacy](#)

County GIS Maps (cont.)



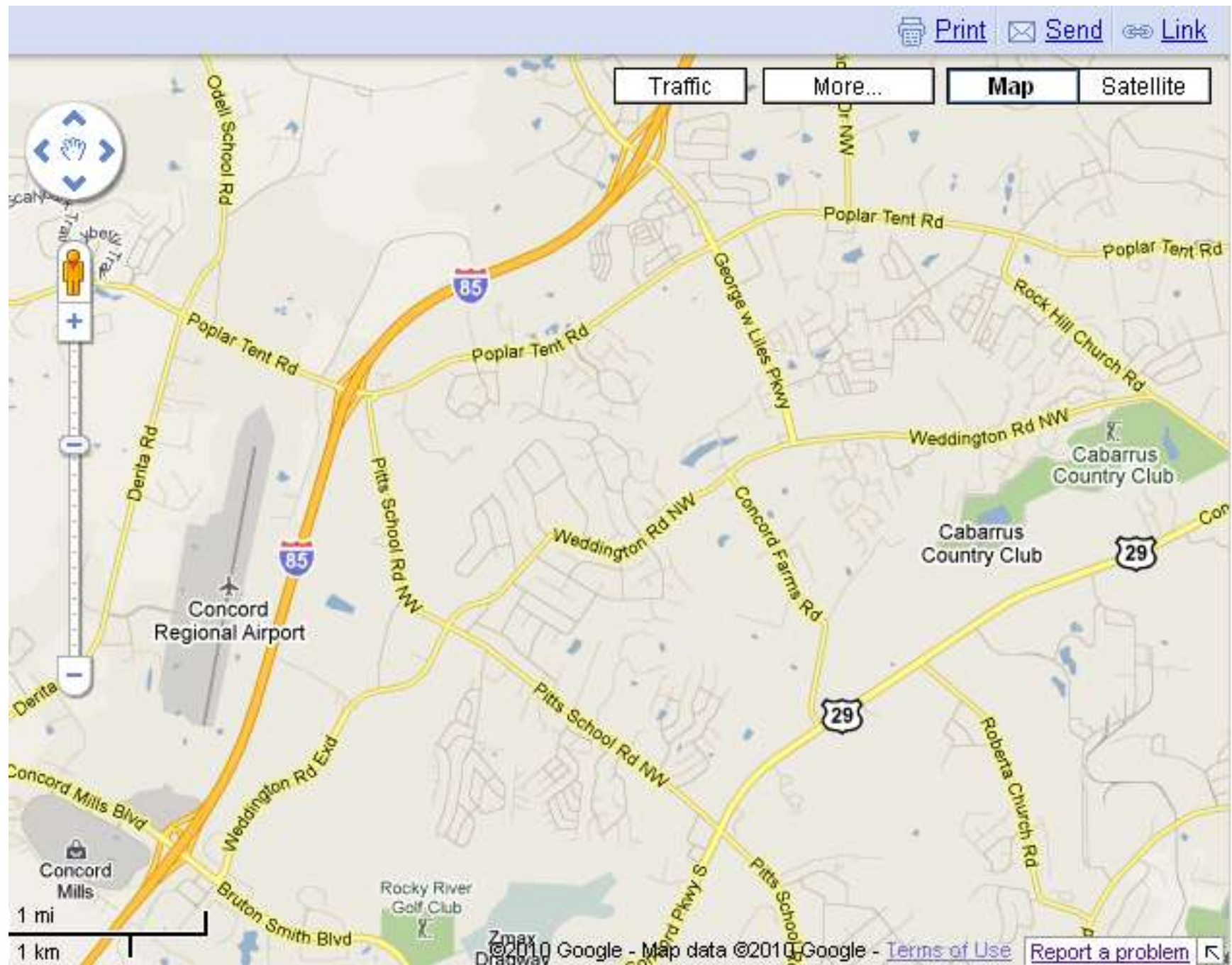
Some county GIS maps also have a measuring tool

Google Maps



http://maps.google.com/maps?f=s&utm_campaign=en&utm_source=en-ha-na-us-bk-gm&utm_medium=ha&utm_term=google%20maps

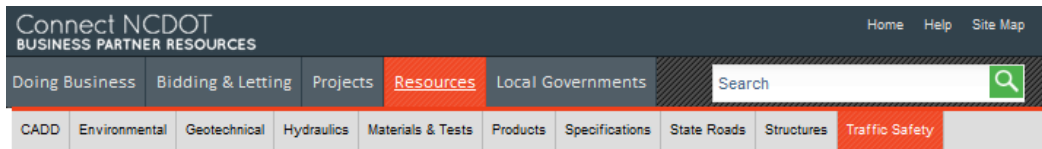
Google Maps (cont.)



Google Maps (cont.)

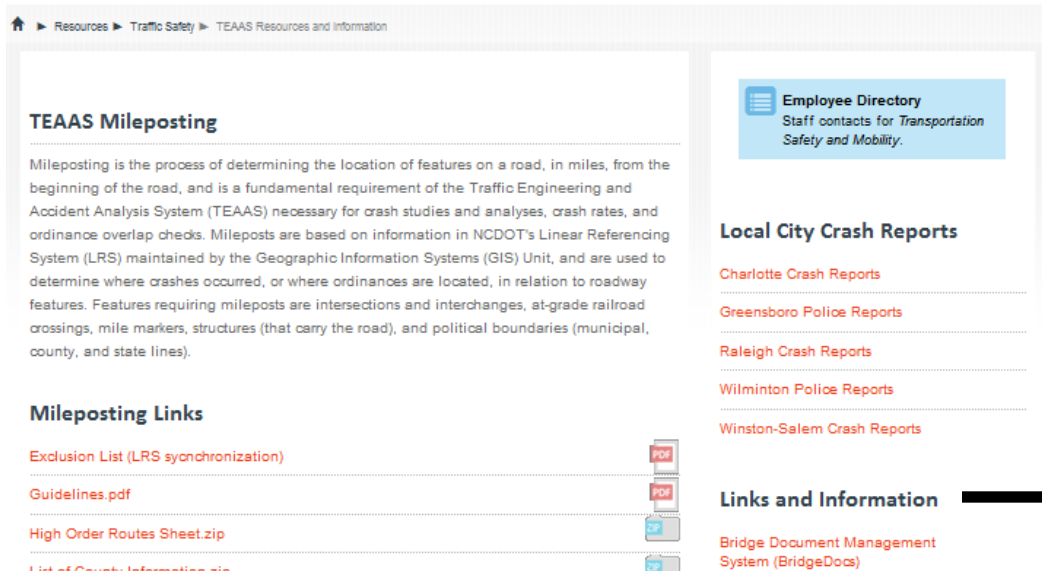


TEAAS Resources



TEAAS Resources and Information

Mileposting, TEAAS Links



Links and Information

[Bridge Document Management System \(BridgeDocs\)](#)

[County GIS Maps](#)

[Crash Rates](#)

[DMV CrashWeb](#)

[DMV CrashWeb Access North Carolina Identity Management Service \(NCID\)](#)

[DMV CrashWeb NCID New Account Instructions](#)

[DMV User Management Application \(UMM\)](#)

[Historical Roadway Characteristics Data \(MLI1\)](#)

[Information, Mapping, & Graphics \(IMG\)](#)

[List of County Information](#)

[MANTIS Bug Tracking System](#)

[NCDOT GIS Data Layers](#)

[NCDOT GIS Unit](#)

[Project Breakdown Maps](#)

[Project Search](#)

[Project Server \(bey let date\)](#)

[SR Number Lookup](#)

[TEAAS Website](#)

[TRACS Website](#)

[Volume \(AADT\) Maps](#)

<https://connect.ncdot.gov/resources/safety/Pages/TEAAS%20Information.aspx>